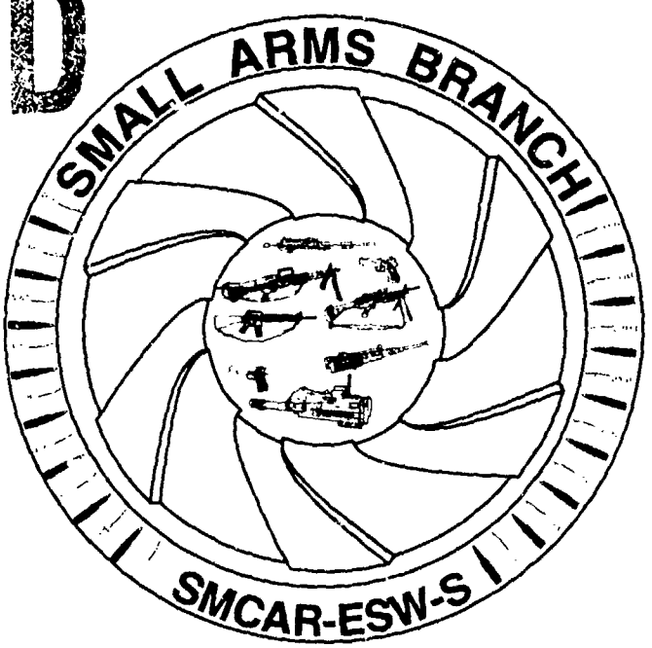
SMCAR-ES-93-1

TRIGGER PULL TESTING M16A2 RIFLE & M4 CARBINE FINAL REPORT

M16 RIFLE TEAM



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Using the current procedures of MIL-R-63997 for M16A2 Rifles, 22% of random trigger pulls taken failed the requirement of 5.5 – 9.5 pounds. Based upon an acceptable failure rate of 1%, trigger pull shall be taken three consecutive times with a requirement of 5.5 to 11.0 pounds.

Using the current procedures of MIL-C-70599 for M4 Carbines, 65% of random trigger pulls taken failed the requirement of 5.5 – 9.5 pounds. Based upon a acceptable failure rate of 1%, trigger pull shall be taken three consecutive times with a requirement of 6.5 – 12.3 pounds.

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FINAL REPORT: TRIGGER PULL TESTING

M16A2 RIFLE & M4 CARBINE

AUGUST 1993

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TECHNICAL REPORT NUMBER: SMCAR–ES–93–1

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TRIGGER PULL TESTING - M16A2 RIFLE AND M4 CARBINE

FINAL REPORT

1.0 Introduction: During May 1993, SMCAR-CCL-LP and SMCAR-ESW-S performed trigger pull testing at Picatinny Arsenal to determine the trigger pull characteristics of the latest production M16A2 Rifles and M4 Carbines. The entire trigger pull test consisted of five subtests plus an additional subtest using trigger mechanisms from Anniston Army Depot.

2.0 Background: The trigger mechanisms for both the M16A2 Rifle and M4 Carbine operate in the same manner. When the weapons are in the "SEMI" mode the trigger pull value is dependant upon the friction between the hammer and trigger, and the loads applied by the hammer spring, trigger spring, and disconnect springs. When the nose of the burst disconnect is in a deep notch of the burst cam, the disconnect spring is partially compressed. When the nose of the burst disconnect is in a shallow notch of the burst cam the disconnect spring is further compressed, resulting in a higher trigger pull value. Therefore, trigger pull values are less when the nose of the burst disconnect rests in a deep notch of the burst cam as opposed to a shallow notch of the burst cam. (See Figure I)

The Depot Maintenance Work Requirement (DMWR) requires that trigger pull testing be performed three consecutive times to ensure the trigger pull shall be taken for one deep notch and two shallow notches. MIL-R-63997 and MIL-C-70599 let the contractor decide how many times the trigger pull shall be taken. This difference in trigger pull acceptance methodology has resulted in a large number of failures using the DMWR method, and minimal failures using the MIL-Spec method.

3.0 Description of Equipment:

a. 25 M16A2 Rifles from Contractor A. Rifles were obtained from the latest production of contract DAAA09-88-C-1056.

b. 25 M16A2 Rifles from Contractor B. Rifles were obtained from the latest production of contract DAAA09-88-G-0004/0008.

c. 30 M4 Carbine burst disconnect springs from Contractor B.

d. Trigger pull fixture from CSTA, Ft. Dix, NJ.

e. Force gage attached to the CSTA trigger pull fixture.

f. Accu Force Digital Force Gage supplied by SMCAR-ESW-S.

g. 20 M16A2 Rifle trigger mechanisms from Anniston Army Depot (ANAD). These trigger mechanisms were from rifles that had failed trigger pull at ANAD.

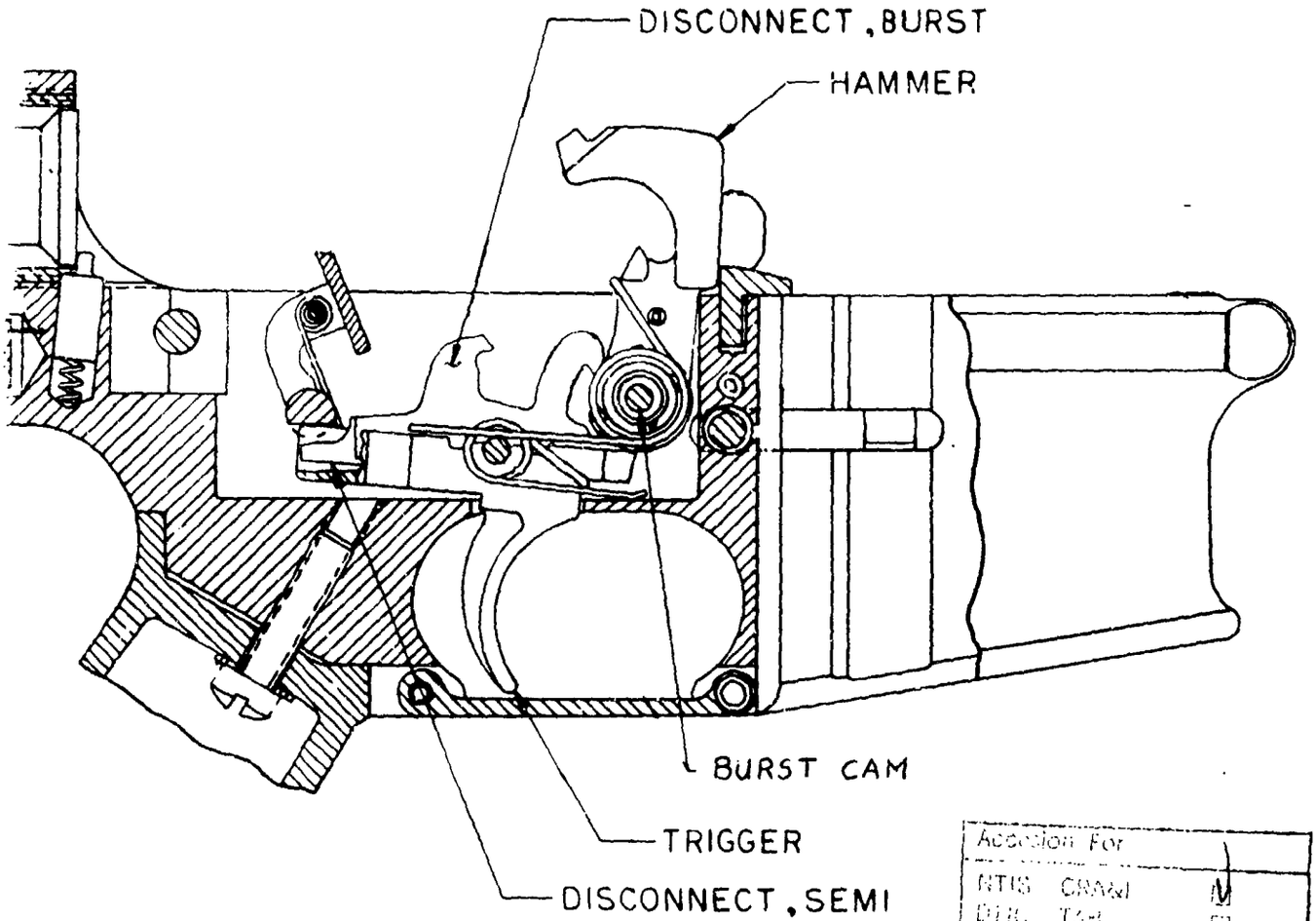

Figure 1

4.0 Testing

4.1 Sub Test #1

4.1.1 Objective: The objective of this subtest was to determine the following:

a. The percent failures of M16A2 Rifles using the trigger pull requirements and procedures of MIL-R-63997, i.e. trigger pull is taken in a random manner.

b. Determine trigger pull values for both deep and shallow notches of the burst cam for both contractors rifles.

c. If M16A2 Rifles do not meet the current trigger pull requirements in both notches, then establish a range of trigger pull values that current rifles are capable of meeting. A 1% failure rate will be used to limit the range of trigger pull values. A 1% failure rate is considered as the acceptable rate of failure.

4.1.2 Procedure: Trigger pull testing was performed on M16A2 Rifles from both Contractor A and B with no alteration to the rifles. All M16A2 rifles were tested with the selector set in the "SEMI" mode. Rifles were lubricated and placed horizontally in the CSTA trigger pull fixture. A gradually applied load was exerted on the center of the trigger parallel to the axis of the barrel bore. The trigger was pulled 12 times (4 pulls in the deep notch, 8 pulls in the shallow notch) on each of 44 rifles (22 Contractor A, 22 Contractor B) and the trigger was pulled 120 times (40 pulls in the deep notch, 80 pulls in the shallow notch) on each of the remaining six rifles.

4.1.3 Results: Results for subtest #1 can be found in Appendix A.

4.1.4 Analysis:

a. Analysis of Contractor A M16A2 Rifles:

1. 1% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

2. 52% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the shallow notch.

3. 35% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 7.9 pounds.

5. Average trigger pull in the shallow notch is 9.6 pounds.

b. Analysis of Contractor B M16A2 Rifles:

1. 0% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

2. 14% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the shallow notch.

3. 10% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 7.2 pounds.

5. Average trigger pull in the shallow notch is 8.9 pounds.

c. 22% of all trigger pulls, for both contractors combined, failed the current requirement of 5.5 - 9.5 pounds.

d. For both deep and shallow notch settings, trigger pull values for Contractor A produced rifles were approximately 0.7 pounds higher than for Contractor B produced rifles.

e. For both contractors combined, the trigger pull value for the shallow notch averaged 1.7 pounds higher than for the deep notch.

f. It was observed that as the number of trigger pulls increased on a rifle the trigger pull value would increase. This may be a result of the lubricant being wiped off the trigger mechanism surfaces. Over the 120 pulls, this increase averaged approximately 0.5 pounds.

g. A trigger pull range of 5.5 - 9.0 pounds will have a failure rate of approximately 1% in the deep notch. A trigger pull range of 6.8 - 11.0 pounds will have a failure rate of approximately 1% in the shallow notch. (1% is an arbitrary choosen value, and is considered an acceptable failure rate in a production environment.)

4.1.5 Conclusions:

a. The trigger pull failure rate, taken in a random manner, for all rifles combined is 22%.

b. The average trigger pull for Contractor A produced rifles in the deep notch is 7.9 pounds, and in the shallow notch is 9.6 pounds. The average trigger pull for Contractor B produced rifles in the deep notch is 7.2 pounds, and in the shallow notch is 8.9 pounds.

c. A trigger pull failure rate of 22% for all rifles combined is unacceptable. Based upon an acceptable failure rate of 1%, trigger pull in the deep notch should be 5.5 - 9.5 pounds, and in the shallow notch 6.8 - 11.0 pounds.

4.2 Sub Test #2

4.2.1 Objective: The objective of this subtest was for informational purposes only to determine the following:

a. The percent failures of M16A2 Rifles using the trigger pull requirements and procedures of MIL-R-63997 with the selector set in the "BURST" mode.

b. Analyze trigger pull values for both deep and shallow notches of the burst cam for both contractors rifles while in the "BURST" mode.

4.2.2 Procedure: Trigger pull testing was performed on M16A2 Rifles from both Contractor A and B with no alteration to the rifles. All M16A2 rifles were tested in the "BURST" mode. Rifles were lubricated and placed horizontally in the CSTA trigger pull fixture. A gradually applied load was exerted on the center of the trigger parallel to the axis of the barrel bore. The trigger was pulled 12 times on each of 20 rifles (10 Contractor A, 10 Contractor B).

4.2.3 Results: Results for subtest #2 can be found in Appendix B.

4.2.4 Analysis:

a. Analysis of Contractor A M16A2 Rifles:

1. 48% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

2. 100% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the shallow notch.

3. 82% of all trigger pulls failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 9.6 pounds.

5. Average trigger pull in the shallow notch is 11.2 pounds.

b. Analysis of Contractor B M16A2 Rifles:

1. 28% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

2. 99% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the shallow notch.

3. 75% of all trigger pulls failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 9.1 pounds.

5. Average trigger pull in the shallow notch is 10.6 pounds.

c. 79% of all trigger pulls, for both contractors combined, failed the current requirement of 5.5 - 9.5 pounds with the rifles in the "BURST" mode.

d. For both deep and shallow notches trigger pull values for Contractor A produced rifles were approximately 0.5 pounds higher than for Contractor B produced rifles in the "BURST" mode.

e. For both contractors, the trigger pull value for the shallow notch was approximately 1.6 pounds higher than for the deep notch in the "BURST" mode.

f. For both deep and shallow notch settings, and for both contractors, trigger pull values for M16A2 rifles in the "SEMI" mode averaged 1.7 pounds lower than when the rifles were in the "BURST" mode.

4.2.5 Conclusions:

a. The trigger pull failure rate for all rifles combined, while in the "BURST" mode, is 79%.

b. The average trigger pull, while in the "BURST" mode, for Contractor A produced rifles in the deep notch is 9.6 pounds, and in the shallow notch is 11.2 pounds. The average trigger pull, while in the "BURST" mode, for Contractor B produced rifles in the deep notch is 9.1 pounds, and in the shallow notch is 10.6 pounds.

4.3 Sub Test #3

4.3.1 Objective: The objective of this subtest was to determine repeatability of trigger pull values simulating the "hanging weight" method used by contractors, as opposed to the CSTA trigger pull fixture. The "hanging weight" method is defined as aligning the rifle in a vertical position, then applying a load vertically on the central portion of the trigger. Instead of applying fixed weights, a force gage was used to obtain quantitative results.

4.3.2 Procedure: All M16A2 rifles were tested in the "SEMI" mode. Rifles were lubricated and held vertically in a vise. A gradually applied load was exerted on the center of the trigger parallel to the axis of the barrel bore. The trigger was pulled 120 times, on each of six rifles (3 Contractor A, 3 Contractor B). Trigger pull values were taken from the Accu Force Digital Force Gage.

4.3.3 Results: Results for subtest #3 can be found in Appendix C.

4.3.4 Analysis:

a. Standard deviation of trigger pull values using the CSTA trigger pull fixture is 0.37. (Obtained from subtest #1 data.)

b. Standard deviation of trigger pull values using the "hanging weight" method is 0.47.

c. The difference in standard deviations indicate the CSTA trigger pull fixture provides better repeatability than using the "hanging weight" method.

d. It was also observed that variation in trigger pull values is largely dependent upon the location of the load applied to the trigger. Trigger pull values are higher when the load is placed on the trigger closer to the lower receiver, than if the load is placed on the trigger closer to the trigger guard.

4.3.5 Conclusions: The standard deviations of trigger pull values for both the CSTA trigger pull fixture and the "hanging weight" method indicates the CSTA trigger pull fixture provides 27% better repeatability of trigger pull readings.

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2. 95% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

3. 63% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 7.3 pounds.

5. Average trigger pull in the shallow notch is 10.5 pounds.

c. 65% of all trigger pulls, for both contractors combined, failed the current requirement of 5.5 - 9.5 pounds.

d. For both contractors combined, the trigger pull value for the shallow notch averaged 3.2 pounds higher than the deep notch.

e. Using an acceptable failure rate of 1% would result in trigger pull values for the deep notch of 6.5 - 9.4 pounds and for the shallow notch of 9.4 - 12.3 pounds.

4.4.5 Conclusions:

a. The trigger pull failure rate, taken in a random manner, for all carbines combined is 65%.

b. The average trigger pull for, all carbines combined, in the deep notch is 7.8 pounds, and in the shallow notch is 10.9 pounds.

c. A trigger pull failure rate of 65% for all carbines combined is unacceptable. Based upon an acceptable failure rate of 1%, trigger pull in the deep notch shall be 6.5 - 9.4 pounds, and in the shallow notch 9.4 - 12.3 pounds. Note: The trigger pull values for the M4 Carbine are higher than for the M16A2 Rifle because the M4 Carbine uses a stronger burst disconnect spring.

4.5 Sub Test #5

4.5.1 Objective: The objective of this subtest was for informational purposes only, to determine the following:

a. The percent failures of M4 Carbines using the trigger pull requirements and procedures of MIL-C-70599 with the selector set in the "BURST" mode.

b. Analyze trigger pull values for both deep and shallow notches of the burst cam while in the "BURST" mode.

4.5.2 Procedure: M4 Carbine trigger mechanisms were placed in 20 M16A2 rifles (10 Contractor A, 10 Contractor B). All M16A2 rifles were tested in the "BURST" mode. Rifles were lubricated and placed horizontally in the CSTA trigger pull fixture. A gradually applied load was exerted on the center of the trigger parallel to the axis of the barrel bore. The trigger was pull 12 times for each of the 20 rifles.

4.5.3 Results: Results for sub test #5 can be found in Appendix E.

4.5.4 Analysis:

a. Analysis of M4 Carbine trigger mechanisms in Contractor A produced rifles:

1. 100% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds.

2. Average trigger pull in the deep notch is 10.9 pounds.

3. Average trigger pull in the shallow notch is 14.0 pounds.

b. Analysis of M4 Carbine trigger mechanisms in Contractor B produced rifles:

1. 88% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

2. 100% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the shallow notch.

3. 96% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 10.1 pounds.

5. Average trigger pull in the shallow notch is 13.1 pounds.

c. 98% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds with the rifles in the "BURST" mode.

d. For both contractors, the trigger pull value for the shallow notch averaged 3.1 pounds higher than in the deep notch.

e. For both deep and shallow notch settings trigger pull values for M4 Carbine trigger mechanisms in the "SEMI" mode averaged 2.7 pounds lower than when the rifles were in the "BURST" mode.

4.5.5 Conclusions:

a. The trigger pull failure rate for all carbines combined is 98%.

b. The average trigger pull, for all carbines combined while in the "BURST" mode, in the deep notch is 10.5 pounds and in the shallow notch is 13.6 pounds.

4.6 Additional Testing (ANAD Trigger Mechanisms)

4.6.1 Objective: Trigger pull testing was performed on M16A2 Rifles from both Contractor A and B with trigger mechanisms that had failed trigger pull testing at ANAD. The purpose of this test was to determine the following:

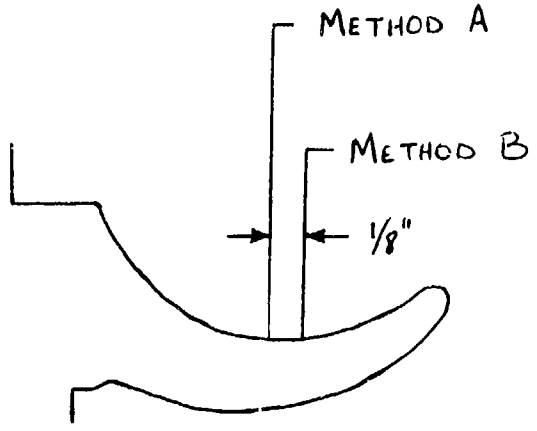
a. Determine trigger pull values in both Contractor A and B rifles using trigger mechanisms that had failed trigger pull at ANAD.

b. Determine cause of trigger pull failures at ANAD.

4.6.2 Procedure:

a. 20 ANAD trigger mechanisms were installed into 20 Contractor B M16A2 Rifles. All rifles were tested in the "SEMI" mode. Rifles were lubricated and placed horizontally in the CSTA trigger pull fixture. A gradually applied load was exerted on the center of the trigger parallel to the axis of the barrel bore. The trigger was pulled 12 times on each of the 20 rifles.

b. 8 ANAD trigger mechanisms were installed into 8 Contractor A M16A2 Rifles. All rifles were tested in the "SEMI" mode. Rifles were lubricated and placed in the CSTA trigger pull fixture so the load would come to rest off center in the direction of the lower receiver (method A). The trigger was pulled 6 times on each of the 8 rifles. The rifles were then placed in the CSTA trigger pull fixture so the load would come to rest off center in the direction of the trigger guard (method B). The trigger was pulled 6 times on each of the 8 rifles. The illustration below indicates the approximate location the load was applied for both methods A and B.



4.6.3 Results: Results for the additional testing can be found in Appendix F.

4.6.4 Analysis:

a. Analysis of trigger pull using procedure of paragraph 4.6.2.a.

1. 0% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

2. 2% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the shallow notch.

3. 1.5% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 6.9 pounds.

5. Average trigger pull in the shallow notch is 8.6 pounds.

b. Analysis of trigger pull using procedure of paragraph 4.6.2.b, method A.

1. 81% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

2. 100% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the shallow notch.

3. 94% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 10.0 pounds.

5. Average trigger pull in the shallow notch is 11.9 pounds.

c. Analysis of trigger pull using procedure of paragraph 4.6.2.b, method B.

1. 0% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the deep notch.

2. 34% of the trigger pulls failed the current requirement of 5.5 - 9.5 pounds in the shallow notch.

3. 23% of all trigger pulls combined failed the current requirement of 5.5 - 9.5 pounds.

4. Average trigger pull in the deep notch is 7.9 pounds.

5. Average trigger pull in the shallow notch is 9.3 pounds.

d. For both deep and shallow notches, trigger pull values when using Method A are approximately 2.0 - 2.5 pounds higher than Method B.

4.6.5 Conclusions:

a. The 1.5% failure of trigger pulls using ANAD trigger mechanisms does not reflect the production failure rate at ANAD. ANAD had been failing up to approximately 75% of the trigger pulls.

b. When the mechanism used to pull the trigger, is placed on the trigger further from the lower receiver, a lower trigger pull value results.

c. The cause of trigger pull failures at ANAD may be a result of the technique used when performing trigger pull, i.e. method A.

4.7 Additional Testing (Lubrication Test) Performed 22 July 93

4.7.1 Objective: During the trigger pull testing, performed in May 93, three new rifles from each contractor were checked for trigger pull 120 times consecutively. Plots of this data indicate that trigger pull increases for approximately 60 to 80 trigger pulls and then levels off. The only explanation conceivable for this condition are changes in lubrication during the trigger pull checks. If trigger pull is as sensitive to lubrication as this data would seem to indicate, differences in lubrication may account for the differences in trigger pull values.

4.7.2 Procedure: The procedures for this test will be as follows:

a. Select 12 rifles at random from both Contractor A and B.

b. Remove the trigger mechanisms, degrease, and lubricate all using CLP (taking care that all parts are lubricated in an identical manner). Reassemble the trigger mechanisms and allow CLP solvents to evaporate for at least four hours.

c. Check ten of each contractors rifles for 12 consecutive trigger pull.

d. Check two of each contractors rifles for 120 consecutive trigger pulls. Then relubricate these rifles and check for another 120 consecutive trigger pulls.

4.7.3 Results: Results for this additional lubrication test can be found in Appendix G.

4.7.4 Analysis:

	May 93		July 93		Difference	
	Avg.	SD	Avg.	SD	Avg.	SD
Contractor A Deep Notch	7.79	0.54	8.05	0.46	.26	-.08
Contractor A Shallow Notch	9.52	0.64	9.66	0.53	.14	-.11
Contractor B Deep Notch	7.16	0.50	7.06	0.43	-.10	-.07
Contractor B Shallow Notch	8.88	0.64	8.81	0.43	-.07	-.21
Combined Deep Notch	7.48	0.61	7.56	0.66	.08	.05
Combined Shallow Notch	9.20	0.71	9.23	0.64	.03	-.07

4.7.5 Conclusions: No significant differences in average trigger pull values due to lubrication changes were observed. No noticeable increase in trigger pull over 240 pulls was noticed in Contractor B rifles. Contractor A rifles exhibited an increase in trigger pull value over 240 pulls, but more gradual than previous testing.

4.8 Additional Testing (Hammer Spring Interchange Test) Performed 28 July 93

4.8.1 Objective: Dimensional inspection results of both Contractor A and B rifles indicate the hammer spring may be the main difference in trigger pull values for both contractors. Contractor A hammer springs are as much as 0.026 oversize for the .76 - .01 dimension, and Contractor B hammer springs are as much as 0.022 undersize for the same dimension. Therefore, a test will be conducted to interchange just the hammer spring for both contractors.

4.8.2 Procedure: Ten M16A2 rifles from both contractors will be selected at random. Remove the hammer spring from all twenty rifles, and replace in the other contractors rifles. Twelve consecutive trigger pull values shall then be taken for each rifle using the CSTA trigger pull fixture. Trigger pull values for each rifle will be compared to trigger pull values for the same rifle obtained in Sub Test #1. (See paragraph 4.1)

4.8.3 Results: Results for the hammer spring interchange test can be found in Appendix H.

4.8.4 Analysis: Average Trigger Pull

	Contractor A Hammer Springs (Sub Test #1)		Contractor B Hammer Springs (Additional Testing)	
Contractor A Rifles	Deep	Shallow	Deep	Shallow
7207826	7.66	9.67	7.61	9.09
7207547	7.74	9.08	6.84	8.53
7207827	7.95	9.84	7.37	9.23
7207429	7.85	9.59	7.63	9.44
7207821	7.49	9.06	7.04	8.63
7207534	7.98	9.81	7.48	8.97
7207475	7.75	9.44	7.23	7.72
7207488	7.80	9.40	7.23	8.94
7207825	7.48	9.24	7.27	8.72
7207736	7.75	9.39	7.88	9.61
Average	7.74	9.45	7.36	8.89

	Contractor B Hammer Springs (Sub Test #1)		Contractor A Hammer Springs (Additional Testing)	
Contractor B Rifles	Deep	Shallow	Deep	Shallow
6570393	7.21	8.79	7.53	8.73
6570394	7.18	9.13	8.14	9.86
6570509	7.16	9.03	8.06	9.45
6570345	7.40	9.17	7.02	8.71
6570623	6.97	8.75	7.88	9.31
6570316	6.73	8.72	7.45	8.86
6570542	6.93	8.22	7.17	8.88
6570318	6.99	8.88	7.12	8.64
6570665	7.06	8.17	7.27	8.64
6570546	6.80	8.87	7.62	9.18
Average	7.04	8.77	7.53	9.03

4.8.5 Conclusions: Interchanging the hammer springs resulted in decreasing Contractor A trigger pull values, while Contractor B trigger pull values increased. The amount of change in trigger pull values for each of the two contractors was approximately .45 pounds. Although, interchanging the hammer spring alone does not result in equal trigger pull values for both contractors, the interchange does bring the values closer together. This difference will result in the other dimensional differences between Contractor A and B M16A2 Rifles.

5.0 Trigger Pull Conclusions:

a. M16A2 Rifle - Using the procedure in MIL-R-63997 for performing trigger pull (subtest #1), 1% of the rifles failed when the test was conducted in a deep notch. Twenty two percent (22%) of the trigger pulls failed when testing was conducted in a random notch of the burst cam.

b. M4 Carbine - Using the procedure in MIL-C-70599 for performing trigger pull (subtest #4), 0% of the carbines failed when the test was conducted in a deep notch. Sixty five percent (65%) of the trigger pulls failed when testing was conducted in a random notch of the burst cam.

6.0 Recommendations:

a. M16A2 Rifle - Based upon an acceptable failure rate of 1%, trigger pull shall be taken three consecutive times with a requirement of 5.5 to 11.0 pounds.

b. M4 Carbine - Based upon an acceptable failure rate of 1%, trigger pull shall be taken three consecutive times with a requirement of 6.5 to 12.3 pounds. (A PPE effort is currently underway. This recommendation is assuming the heavier disconnect springs will be used, and no other changes are needed.)

APPENDIX A

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207475	7.31	9.31	9.09	7.81	9.44	9.31	7.94	9.41	9.41	7.94	9.81	9.75
7207429	7.56	9.75	9.0	7.91	9.62	9.38	7.69	9.81	9.69	8.25	9.62	9.87
7207827	7.5	9.34	9.56	7.97	9.62	9.87	8.06	9.84	9.81	8.28	10.5	10.2
7207605	7.25	9.44	9.03	7.44	8.62	9.0	7.44	9.06	9.38	7.5	9.41	9.62
7207488	7.41	8.75	9.44	7.88	9.38	9.38	7.84	9.5	9.59	8.06	9.81	9.38
7207547	7.19	8.88	8.88	7.41	8.69	8.94	8.56	8.97	9.41	7.78	9.41	9.44
7207514	7.09	8.97	8.81	7.19	8.62	9.25	7.5	8.84	9.03	7.38	8.94	9.09
7207713	8.22	9.84	9.87	8.25	9.75	10.0	8.56	10.0	10.0	8.31	9.62	10.2
7207706	8.06	9.78	9.22	7.88	9.87	9.84	8.0	10.2	10.0	8.38	9.87	9.97
7207821	7.75	9.15	8.69	7.34	9.0	9.19	7.38	9.28	9.28	7.5	8.41	9.44
7207494	7.5	8.72	8.84	7.25	8.81	9.28	7.5	9.5	9.38	7.75	9.56	9.38
7207516	7.25	9.0	9.38	8.12	8.62	9.25	7.15	9.28	9.41	8.53	9.41	9.53
7207591	10.1	12.2	11.6	8.25	10.7	11.2	7.75	10.0	10.2	8.53	11.0	10.8
7207736	7.12	9.25	9.41	7.78	9.25	8.5	7.88	9.31	10.1	8.22	9.47	9.84
7207824	8.0	9.25	9.84	7.94	10.3	10.5	8.84	10.2	10.4	8.65	11.1	11.2
7207592	7.0	8.65	8.94	7.38	9.34	9.25	7.5	9.44	9.47	7.88	9.22	9.47
7207604	8.0	10.0	10.1	8.69	9.87	10.2	8.06	10.1	9.84	8.56	10.1	9.65
7207554	8.38	9.44	9.78	8.28	10.6	10.3	8.84	10.5	10.7	8.84	10.6	10.6
7207534	8.38	8.62	9.09	7.47	10.5	9.62	7.88	10.4	9.78	8.19	10.3	9.87
7207825	7.22	8.81	8.94	7.25	9.12	9.19	7.59	9.38	9.5	7.84	9.5	9.5
7207491	7.69	9.31	9.19	7.44	9.31	9.5	7.91	9.65	9.65	7.94	9.94	9.75
7207826	7.12	9.06	9.53	7.75	9.62	9.47	7.75	9.75	9.87	8.0	10.1	9.94

APPENDIX A

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570671	7.56	8.53	9.12	7.23	8.81	8.88	7.44	9.25	9.25	7.44	9.5	8.38
6570383	8.15	8.75	8.62	7.38	9.94	9.03	7.31	10.2	8.5	7.28	10.3	8.62
6570629	8.69	11.8	9.75	8.56	10.2	9.62	7.69	10.5	10.6	8.53	11.1	10.0
6570545	7.19	8.34	8.53	8.25	8.69	8.72	7.41	8.38	8.88	7.0	8.56	9.31
6570999	6.94	8.81	8.91	7.25	9.25	8.78	7.12	8.69	8.97	7.22	9.0	9.19
6570516	7.65	9.62	9.84	8.38	9.25	9.25	7.44	9.25	8.56	7.72	9.31	9.06
6570546	7.5	9.75	8.25	6.56	8.65	8.25	6.75	9.41	9.0	6.38	8.12	9.5
6570345	6.72	9.12	9.78	7.44	10.8	8.38	8.38	8.5	8.57	7.06	9.25	8.94
6570318	7.12	8.69	8.94	6.72	9.0	9.0	6.94	8.81	9.65	7.19	8.03	8.88
6570358	6.82	8.66	8.5	6.97	9.12	8.88	6.65	8.56	8.56	6.82	8.5	8.5
6570657	7.5	9.38	9.69	7.31	8.81	8.94	7.56	8.56	8.59	7.56	9.12	9.0
6570393	7.72	8.88	9.06	7.28	8.97	7.91	6.69	9.06	9.06	7.15	9.5	9.06
6570697	6.62	9.38	9.06	7.22	8.88	9.53	6.5	8.75	9.69	6.81	8.25	8.62
6570316	6.94	8.88	8.56	5.59	8.69	8.69	7.0	8.75	8.88	7.38	8.78	8.5
6570520	6.69	8.69	8.72	7.31	8.91	8.0	7.38	9.0	8.94	7.38	8.62	8.81
6570688	7.25	9.06	8.62	6.91	9.75	9.25	7.34	9.0	9.25	7.38	10.1	9.38
6570394	7.19	9.03	8.19	7.19	9.06	10.6	7.34	8.97	8.88	7.0	9.19	9.12
6570509	7.06	8.59	9.09	7.12	8.91	9.75	7.28	9.0	8.97	7.19	8.94	8.97
6570623	6.22	8.69	8.47	7.25	8.94	8.78	7.12	8.69	8.81	7.28	8.81	8.81
6569479	6.18	7.75	8.15	6.28	8.12	8.31	6.38	8.31	8.44	6.69	8.75	8.44
6570665	6.94	8.12	8.38	7.12	8.25	8.34	7.28	8.44	8.06	6.91	8.22	7.53
6570542	6.72	8.31	8.34	6.88	7.31	8.5	6.72	8.25	8.44	7.38	8.19	8.38

APPENDIX A

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207492	8.75	8.28	8.28	7.28	8.78	8.94	7.41	9.0	9.12	7.25	8.91	8.81
	6.85	8.91	9.81	7.25	8.88	8.88	7.47	9.06	9.25	7.62	9.25	9.25
	7.78	9.44	9.12	7.69	9.62	9.5	7.75	9.94	9.84	7.81	9.84	9.53
	7.84	9.53	9.31	7.65	9.56	9.59	8.0	9.72	9.38	7.75	9.72	9.87
	8.22	9.65	8.97	7.59	9.53	9.87	8.06	9.87	10.3	7.94	9.69	9.65
	7.81	9.75	9.81	7.97	9.65	9.84	8.28	10.2	9.69	8.41	10.1	10.1
	8.31	9.38	9.97	8.53	9.87	9.97	8.72	8.94	9.90	8.38	10.1	10.2
	8.56	10.3	10.2	8.56	10.2	10.4	8.5	10.5	10.0	8.88	10.4	10.0
	8.84	10.2	10.5	8.53	10.3	10.0	8.75	10.4	10.7	8.47	10.2	9.87
	8.62	10.8	10.4	8.75	10.1	10.3	8.59	10.6	10.6	8.56	9.94	10.4

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207701	7.22	8.56	9.03	7.44	9.53	9.38	7.19	9.19	9.25	7.69	9.56	9.69
	8.12	9.65	9.59	7.91	9.75	9.31	8.0	9.94	9.31	8.09	9.65	9.78
	8.0	9.41	10.1	8.06	10.3	10.2	7.88	9.5	9.44	8.06	9.69	9.81
	8.19	9.94	9.75	7.94	9.44	10.0	8.31	9.94	9.81	8.06	9.81	10.1
	8.09	9.78	9.87	8.41	9.87	9.75	8.15	10.0	9.97	8.38	10.2	9.97
	8.5	10.0	9.81	8.38	10.1	9.78	8.44	10.1	10.1	8.41	10.1	10.1
	8.97	10.3	10.3	8.62	10.2	9.87	8.41	10.1	10.4	8.65	10.4	10.4
	8.53	10.1	10.0	8.31	10.2	10.0	8.5	10.1	10.5	8.69	10.4	10.2
	8.69	10.3	10.2	8.41	10.1	10.2	8.5	10.3	10.6	8.5	10.6	10.2
	9.0	10.2	10.0	8.59	10.3	10.1	8.78	10.4	10.3	8.69	10.4	10.1

APPENDIX A

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207550	6.97	8.09	8.22	6.69	8.15	8.41	7.31	8.75	8.94	7.09	9.15	9.03
	7.12	8.59	9.38	7.19	9.06	8.62	7.19	8.94	9.03	7.41	9.12	9.03
	7.34	9.12	9.03	7.28	9.19	9.31	7.53	9.19	9.0	7.56	9.15	9.5
	7.53	9.28	9.31	7.5	8.44	9.28	7.72	9.38	9.44	7.62	9.19	9.38
	7.72	9.56	9.44	7.75	9.62	9.38	7.94	9.5	9.53	7.69	9.56	9.44
	7.65	9.62	9.5	7.65	9.53	9.75	7.91	9.44	9.34	7.84	9.56	9.62
	7.69	9.44	9.56	7.62	9.44	9.62	7.91	9.5	9.56	7.75	9.72	9.84
	7.75	9.53	9.62	7.88	9.65	9.59	7.88	9.5	9.78	7.81	9.62	9.53
	7.81	9.56	9.47	8.06	9.62	9.78	8.12	9.53	9.78	7.75	9.56	9.56
	7.88	9.47	9.5	8.0	9.65	9.65	7.88	9.44	9.56	7.97	9.78	9.56

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570698	6.88	8.69	8.38	6.75	8.56	8.44	6.88	8.62	8.75	6.41	9.41	8.41
	7.06	8.75	9.0	7.28	9.0	8.78	7.25	8.81	8.28	7.47	9.12	8.97
	7.5	9.09	9.41	7.03	9.22	8.88	7.31	9.0	8.88	7.09	9.19	9.41
	7.19	9.38	8.34	7.5	9.06	8.72	7.15	9.12	9.19	7.28	9.28	9.31
	7.59	9.19	9.09	7.5	9.5	9.12	7.56	9.5	9.31	7.44	8.97	9.19
	7.12	9.31	8.72	7.88	9.19	9.03	7.28	9.38	9.38	7.75	9.25	9.0
	6.94	9.06	9.28	7.03	9.25	9.09	7.0	9.06	9.12	7.22	9.28	8.97
	7.31	9.19	9.22	7.31	9.12	8.88	7.47	9.25	8.97	7.47	9.15	9.22
	7.44	9.19	9.09	7.31	9.38	9.31	7.31	9.56	8.94	7.06	9.12	7.22
	7.38	9.31	9.12	7.44	9.31	9.22	7.75	9.31	9.12	7.22	9.31	9.19

APPENDIX A

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570580	6.91	8.75	8.47	6.94	8.38	8.65	7.25	8.81	8.91	7.31	8.59	8.88
	7.44	9.12	8.65	7.69	9.0	9.25	7.47	9.38	9.12	7.78	9.34	9.47
	7.35	9.09	9.53	7.88	9.22	9.56	8.03	8.91	9.69	7.5	8.88	9.5
	7.62	9.94	9.81	8.0	9.9	11.1	7.59	9.44	9.22	8.06	9.65	9.44
	7.56	9.25	9.15	7.75	9.56	9.44	7.38	9.56	9.06	7.38	9.78	9.81
	7.94	9.35	9.65	7.94	9.25	10.2	8.09	9.65	9.75	7.44	9.44	9.62
	8.25	10.0	9.87	8.09	9.65	10.5	7.5	9.94	9.5	7.56	9.5	10.2
	8.19	8.91	9.84	7.56	9.78	10.5	7.88	9.97	10.0	8.23	9.38	9.87
	7.88	9.5	9.69	7.94	10.2	9.94	8.12	9.69	9.12	8.38	9.62	9.78
	7.85	9.56	9.87	7.88	9.84	10.1	8.12	10.1	9.84	7.75	10.0	9.78

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570624	6.56	8.06	7.69	6.41	8.0	8.09	6.56	8.09	8.06	7.41	8.94	8.0
	6.5	7.22	8.0	6.5	8.19	8.19	6.59	8.19	8.28	6.69	8.65	8.25
	6.62	8.44	8.38	6.69	8.69	9.03	6.78	8.5	8.56	6.81	8.28	8.56
	6.81	8.44	8.47	6.88	8.41	8.41	6.78	8.5	8.38	6.16	8.5	8.44
	6.94	8.41	8.44	6.88	8.53	8.53	6.84	8.47	8.47	6.88	8.38	8.44
	7.31	8.19	8.25	6.72	8.34	8.38	6.81	8.41	8.5	6.88	8.47	7.97
	6.81	8.34	8.38	6.75	8.44	8.15	6.88	8.41	8.41	6.69	8.44	8.44
	6.81	8.53	8.56	6.81	8.5	8.31	6.94	8.53	8.41	6.97	9.53	8.53
	6.81	8.44	8.5	6.84	8.38	8.5	6.88	8.56	8.59	7.03	8.25	8.59
	7.38	8.5	8.5	6.91	8.38	8.5	6.88	8.56	8.56	6.94	8.28	8.5

APPENDIX B

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207475	9.5	11.2	11.0	9.53	11.6	11.0	9.75	11.2	11.1	10.4	11.3	10.3
7207429	9.34	11.1	11.2	9.69	11.3	11.2	10.0	11.5	11.2	9.78	11.2	11.4
7207827	9.75	11.7	11.6	10.3	11.8	12.0	9.47	10.6	11.2	9.34	11.2	11.6
7207605	9.69	10.6	10.8	9.09	10.6	10.9	9.38	10.5	11.0	9.34	11.0	10.5
7207488	9.44	11.2	11.5	9.47	11.2	11.3	9.81	11.5	11.6	9.62	11.5	11.5
7207547	9.03	10.8	10.9	8.94	10.8	10.7	9.0	10.4	10.6	9.0	10.8	10.5
7207514	9.81	10.2	10.2	8.81	10.6	10.6	9.12	10.0	10.2	8.75	10.5	10.4
7207713	10.2	11.8	12.0	9.75	11.8	11.6	10.8	11.7	11.9	10.2	11.6	12.2
7207706	8.47	11.6	11.9	11.1	11.8	12.2	10.6	12.4	11.8	9.94	11.7	11.8
7207821	9.31	11.1	10.9	9.12	11.2	11.1	8.97	10.6	10.9	9.0	10.8	10.8

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570671	9.94	11.4	10.2	8.69	9.90	10.6	9.5	10.5	11.0	9.25	10.6	11.3
6570383	10.9	11.1	11.9	10.2	12.5	11.9	8.44	10.6	11.4	10.1	10.8	11.1
6570629	10.3	11.2	11.4	9.94	12.1	11.7	9.9	12.1	11.4	9.53	11.4	11.9
6570545	9.06	10.2	10.7	8.47	10.0	10.1	8.56	10.1	10.1	8.75	9.25	10.2
6570999	10.1	10.7	10.1	9.31	10.3	10.3	9.0	10.4	10.6	9.0	11.0	10.8
6570516	9.44	10.4	11.5	9.15	11.5	10.4	9.75	10.5	10.6	9.19	10.6	10.8
6570546	8.31	10.6	9.19	8.81	9.65	10.9	7.88	10.1	9.53	8.44	9.69	10.6
6570345	10.4	10.2	10.7	9.0	10.4	10.4	8.88	10.6	11.3	8.69	10.6	10.6
6570318	8.5	10.2	10.1	8.0	9.81	11.8	9.12	9.69	9.84	8.0	11.9	10.6
6570358	8.38	10.1	10.8	8.09	9.62	9.78	8.06	10.5	10.0	8.22	9.90	10.1

APPENDIX C

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207550	8.68	10.4	10.5	7.89	11.3	10.1	6.88	11.2	9.89	7.56	9.92	9.79
	9.54	9.21	11.1	9.54	10.6	10.5	9.06	10.5	10.5	8.18	9.96	11.5
	9.35	10.4	10.0	9.87	9.78	9.59	8.73	11.0	10.4	8.88	9.83	10.4
	9.01	10.6	9.81	8.42	10.5	10.6	8.6	11.0	10.7	8.66	9.72	9.2
	9.65	9.81	9.23	7.91	9.28	9.52	8.9	10.4	10.8	8.49	9.96	9.56
	9.17	10.2	10.0	9.43	9.19	10.6	8.97	9.79	10.2	8.4	10.1	9.96
	9.04	10.1	10.2	8.53	9.68	8.97	8.9	10.0	8.88	8.93	10.6	10.4
	8.97	11.1	11.2	8.64	10.3	9.89	8.16	10.7	10.5	8.57	9.17	9.17
	8.68	10.3	10.3	9.19	10.1	10.4	8.93	9.89	9.85	8.91	10.6	9.99
	9.13	11.0	10.5	8.82	10.0	10.0	8.49	10.1	9.83	8.22	9.98	10.8

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207492	9.04	10.1	10.5	8.62	10.5	10.3	8.18	10.9	10.6	8.42	10.1	10.5
	9.13	10.2	10.2	8.38	9.67	10.2	8.4	9.72	10.4	9.26	10.1	9.68
	8.49	10.2	9.54	9.04	10.1	9.23	8.4	9.94	9.68	7.36	9.13	9.92
	8.27	9.87	10.4	8.82	9.65	10.1	8.57	10.1	9.89	8.42	10.4	10.0
	8.05	10.1	9.37	8.91	10.2	10.1	8.62	10.4	10.2	8.64	9.85	10.1
	9.39	10.1	10.2	8.99	10.0	10.3	8.64	10.7	10.1	8.38	10.2	10.5
	8.42	10.7	10.6	7.98	10.4	10.1	8.58	9.68	10.3	8.13	9.92	10.3
	8.6	10.3	10.6	8.36	10.4	10.3	9.21	9.61	10.2	9.45	9.48	9.78
	9.3	10.7	10.2	8.13	9.74	10.4	9.08	9.76	10.2	8.46	10.6	10.8
	8.15	9.63	10.4	8.49	10.8	10.6	8.68	10.4	10.1	9.43	10.1	9.74

APPENDIX C

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207701	7.36	9.5	9.35	9.06	10.5	10.6	8.84	10.0	9.98	8.64	10.3	11.0
	9.08	10.9	10.8	9.01	10.2	11.2	9.41	10.3	10.7	9.35	10.0	11.2
	9.43	11.0	10.5	9.35	10.5	10.5	9.28	11.8	10.8	9.34	10.1	10.1
	8.8	10.4	10.9	9.48	10.8	10.6	8.77	10.3	10.1	8.44	10.2	10.1
	8.44	10.4	10.7	9.19	10.1	10.8	8.86	10.6	9.72	9.24	10.5	10.9
	8.75	9.74	10.1	9.21	10.7	10.5	8.47	10.4	10.5	9.24	10.6	10.6
	9.43	10.4	11.1	9.56	10.8	10.3	9.44	11.2	10.7	9.26	10.1	10.1
	9.68	11.4	10.1	9.39	10.6	10.5	9.35	10.8	10.4	8.62	10.6	10.7
	8.71	10.3	10.5	9.17	10.5	10.6	9.39	10.1	10.5	9.17	9.92	10.8
	9.26	10.9	10.4	9.01	10.4	10.7	8.9	10.4	11.0	9.01	9.92	10.1

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570698	7.05	10.6	10.6	8.22	9.32	10.2	9.06	9.43	10.7	7.63	9.79	8.99
	8.97	10.1	10.4	8.31	9.85	9.99	7.21	10.7	9.87	7.69	9.39	9.96
	7.96	10.5	10.4	7.27	10.3	9.98	8.18	9.61	9.92	8.25	9.57	9.85
	8.36	10.3	9.65	7.58	9.13	9.7	8.24	10.4	10.8	6.7	9.54	10.4
	8.09	9.79	10.4	8.69	10.1	10.3	8.18	9.19	10.6	7.36	10.3	9.35
	8.42	10.2	9.89	8.25	10.2	9.46	7.58	10.6	10.7	8.6	9.17	9.41
	6.99	10.0	10.0	7.94	10.1	9.04	8.51	9.83	10.6	6.79	9.35	10.8
	7.82	9.61	9.89	8.86	9.52	10.3	8.51	10.9	10.5	8.95	9.92	10.3
	8.6	10.4	10.3	7.94	9.99	10.0	8.82	9.26	9.81	8.68	10.4	10.4
	7.34	10.4	9.79	8.35	9.89	10.2	8.29	9.78	10.1	8.71	9.43	10.5

APPENDIX C

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570580	8.99	10.1	10.0	7.72	9.57	10.9	8.66	10.3	10.0	8.0	9.13	9.17
	7.71	9.28	10.2	8.07	10.4	10.2	7.91	10.6	9.1	8.31	10.1	10.3
	9.56	9.46	9.59	9.28	10.6	10.7	8.77	10.9	9.41	8.38	9.61	10.1
	8.29	10.2	10.5	8.29	11.0	9.19	8.25	10.4	11.4	9.45	8.9	10.3
	7.94	9.06	9.45	9.02	9.61	11.0	8.31	11.1	10.2	8.07	10.5	9.76
	8.05	9.92	10.5	8.0	10.1	8.84	8.0	10.5	9.76	8.99	10.7	10.3
	9.1	9.39	8.91	7.93	11.2	10.7	8.09	9.54	9.61	9.35	10.3	9.79
	9.04	10.6	11.0	7.58	9.87	9.32	9.43	10.6	11.5	8.35	9.7	9.37
	8.88	10.5	10.3	8.35	10.7	10.5	8.42	9.52	10.0	8.18	10.6	10.1
	7.54	9.23	10.9	9.63	9.48	9.94	8.38	10.4	9.26	8.22	9.46	11.2

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570624	7.01	10.1	9.98	7.76	10.1	9.57	7.14	9.37	9.61	8.42	9.94	9.99
	7.63	9.37	10.1	7.32	9.98	10.1	7.72	10.0	9.34	7.01	9.5	9.61
	7.61	9.12	9.85	8.31	9.76	9.96	7.41	9.79	8.79	8.0	9.68	9.59
	7.67	9.19	9.98	8.0	9.37	9.72	8.35	9.56	9.89	7.98	8.69	10.1
	8.04	9.21	9.39	8 49	10.0	9.52	8.27	9.89	9.81	7.71	10.0	9.26
	7.28	9.5	9.79	7.87	9.46	9.7	8.42	9.68	9.68	8.0	8.16	6.08
	7.03	9.48	9.63	8.33	9.24	9.13	8.13	9.17	9.52	7.43	10.2	9.81
	8.29	9.41	10.0	7.63	9.81	9.9	7.49	9.81	9.68	7.61	9.46	9.39
	8.51	9.89	9.46	7.63	9.3	9.63	8.18	9.65	9.46	7.98	9.68	9.76
	7.25	9.43	9.24	8.27	9.15	9.13	7.8	9.65	9.92	7.58	9.26	9.9

APPENDIX D

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207592	7.94	10.7	11.1	7.97	10.5	11.2	8.06	10.9	10.5	8.25	11.2	11.0
7207554	8.34	12.2	11.9	8.62	12.2	12.4	8.65	11.6	11.9	8.65	12.3	12.4
7207604	8.09	11.5	11.6	8.47	11.8	11.7	8.0	12.1	11.9	8.31	11.8	11.8
7207534	7.69	10.9	10.9	7.62	10.2	10.5	9.44	10.2	10.3	7.69	10.5	10.8
7207491	7.94	12.0	12.1	8.38	12.0	12.1	7.94	11.8	11.7	8.06	11.6	11.8
7207825	7.81	10.8	10.8	7.41	10.7	10.7	8.0	11.1	11.0	7.94	10.9	11.0
7207826	8.41	10.8	11.2	8.09	11.4	11.4	8.03	11.1	11.0	8.19	11.5	11.5
7207749	8.03	10.9	11.2	8.0	11.2	11.4	9.19	11.3	11.1	7.31	10.9	10.8
7207701	8.91	11.6	12.0	8.56	11.9	11.6	8.69	11.6	11.5	8.56	11.5	11.2
7207550	7.53	10.9	10.9	8.25	11.0	10.8	7.94	10.6	10.8	7.94	10.9	11.2

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570345	6.94	10.4	10.8	6.88	10.1	10.5	7.25	10.6	10.6	6.97	10.6	10.8
6570393	8.03	11.9	11.2	7.84	11.2	11.5	8.09	11.6	11.4	7.78	11.1	11.0
6570698	8.59	10.5	10.5	7.19	10.6	10.7	7.22	11.0	10.6	7.53	11.0	11.0
6570540	6.62	9.31	9.5	6.91	10.1	9.81	7.12	9.41	9.75	6.91	9.87	9.94
6570318	6.75	10.1	9.78	7.22	10.1	9.94	6.94	10.4	10.3	7.22	9.75	10.1
6570688	7.78	10.9	10.8	7.75	10.8	10.9	7.22	10.9	11.2	7.44	10.8	10.6
6569479	6.81	10.2	9.87	6.69	9.5	9.87	7.19	9.84	9.62	6.38	9.9	9.65
6570580	7.41	10.2	10.8	7.31	10.6	11.0	7.38	10.9	10.7	7.69	10.8	10.8
6570629	7.97	10.6	11.3	7.44	11.2	11.4	7.38	10.7	11.2	7.41	10.9	10.7
6570657	7.65	10.2	10.6	7.62	10.6	10.2	7.34	10.2	11.6	7.12	10.1	10.4

APPENDIX E

Contractor A M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207592	12.1	14.8	13.4	10.4	14.5	13.5	10.3	14.2	13.6	11.2	14.4	13.7
7207554	12.2	15.3	15.2	11.8	15.2	15.2	12.1	14.9	15.1	11.2	15.2	14.6
7207604	11.2	14.3	14.3	11.1	15.1	14.5	10.9	14.7	14.7	11.1	14.8	14.8
7207534	10.3	13.7	13.8	10.8	14.2	14.0	10.5	14.1	13.9	11.0	13.9	13.7
7207491	10.8	11.6	11.3	10.7	14.1	13.4	11.0	14.3	14.2	11.3	13.9	14.4
7207825	10.2	13.5	12.5	10.4	13.6	13.4	10.5	13.8	13.5	10.6	13.3	13.4
7207826	10.9	14.0	13.6	10.6	13.9	14.2	11.1	13.5	13.9	10.8	14.6	13.7
7207492	10.9	14.3	13.4	10.6	13.8	13.9	11.0	14.2	14.7	10.5	13.7	13.9
7207701	10.9	14.7	14.8	11.6	14.8	14.2	11.6	14.4	14.6	11.3	14.9	14.6
7207550	10.2	13.2	13.5	10.3	13.7	13.7	10.6	13.1	13.3	10.5	13.2	13.0

Contractor B M16A2 Rifles

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570345	10.6	13.2	13.4	9.47	11.6	13.4	9.75	13.3	12.9	10.1	13.6	12.9
6570393	11.0	14.2	13.8	10.5	13.8	14.1	10.8	14.4	14.1	10.6	14.1	14.1
6570698	10.6	13.7	13.5	10.2	13.4	13.2	10.6	13.4	13.3	9.72	13.0	13.4
6570540	9.44	12.2	12.2	9.5	12.5	12.5	9.2	12.3	12.4	9.62	12.7	12.7
6570318	10.1	12.7	12.5	9.81	12.8	12.9	9.59	12.7	12.8	9.65	12.0	12.5
6570688	12.0	12.8	13.7	10.7	13.4	13.2	10.7	12.9	13.1	10.3	13.5	13.5
6569479	9.59	12.9	12.7	9.56	14.1	12.4	9.25	13.1	13.4	9.72	12.3	13.0
6570580	10.9	13.0	13.4	10.2	13.3	13.1	10.1	13.2	13.2	10.6	13.4	12.9
6570629	10.4	12.8	13.5	9.72	13.2	13.5	10.3	13.8	13.1	10.1	13.8	13.5
6570657	9.75	10.8	13.0	9.59	12.9	13.0	9.72	12.6	12.6	10.0	12.6	12.8

APPENDIX F

Anniston Mod Kit Trigger Mechanisms - Procedure A

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7388048	6.56	8.31	7.94	6.72	8.56	8.31	6.75	8.75	8.69	7.0	8.69	9.06
7388032	6.62	8.25	8.25	7.31	8.25	8.25	7.22	8.25	8.12	6.62	8.19	8.12
4479433	6.72	8.12	8.0	7.41	8.19	8.75	6.44	7.84	8.62	7.0	9.5	8.69
2224834	5.94	8.38	8.31	6.25	8.25	8.22	6.31	8.03	8.22	6.62	8.25	8.31
7388882	7.34	9.31	8.94	7.0	9.22	9.38	7.62	9.25	9.0	7.28	9.38	9.0
7390649	6.62	8.72	9.19	6.69	8.81	8.81	7.0	8.94	9.0	6.31	8.75	8.78
7390465	6.78	9.09	8.78	7.15	9.09	8.94	8.38	10.1	9.12	7.19	9.25	9.31
7389256	6.88	8.44	8.44	6.85	8.5	8.5	6.78	8.62	8.56	6.94	8.5	8.75
7391053	6.97	8.31	8.47	7.62	8.5	8.47	7.06	8.53	8.65	7.28	8.38	8.69
7391185	6.38	8.09	8.0	6.65	8.25	8.34	6.47	8.34	8.44	6.69	8.38	9.06
7391193	7.34	8.88	8.69	7.06	8.44	8.56	6.85	8.59	8.75	6.94	9.69	8.53
7390291	7.65	9.41	8.88	7.62	9.38	9.28	7.65	8.38	9.31	7.69	9.28	9.38
7391967	7.34	8.88	9.12	7.44	9.31	9.25	7.5	9.38	9.5	7.56	9.5	9.47
7389445	5.94	7.81	7.75	6.56	7.91	8.19	6.53	7.94	7.84	6.0	7.72	7.94
7391131	7.0	9.03	9.69	7.28	8.81	9.03	7.53	8.81	9.09	7.53	9.09	8.88
2223334	6.59	9.12	8.65	6.78	8.5	8.81	6.97	8.75	8.75	6.91	8.88	8.75
7388372	6.94	8.5	8.69	7.69	8.97	8.88	6.97	8.91	8.88	7.75	8.78	8.94
7391058	5.97	8.25	9.34	6.0	7.12	7.44	6.09	7.5	7.15	6.06	7.81	7.69
7390679	6.59	8.41	8.25	6.56	8.25	8.31	6.56	8.38	8.38	6.62	8.34	8.38
7388052	7.19	10.0	8.31	7.5	8.62	8.72	7.88	9.0	8.88	7.41	8.94	8.88

APPENDIX F

Procedure B, Contractor A Rifles - Method A

S/N	Dp	Sh	Sh	Dp	Sh	Sh
7207592	10.9	11.9	11.4	10.2	13.2	13.0
7207554	11.7	13.2	13.5	11.5	14.2	13.4
7207550	9.87	12.6	11.6	9.62	11.7	11.7
7207701	10.1	12.2	11.6	9.72	11.8	11.8
7207492	10.2	10.8	12.7	10.1	12.7	12.4
7207826	10.2	11.8	11.1	10.1	12.0	11.9
7207825	8.5	10.2	10.0	9.03	10.9	11.0
7207534	9.47	11.5	11.0	9.56	11.0	11.4

Procedure B, Contractor A Rifles - Method B

S/N	Dp	Sh	Sh	Dp	Sh	Sh
7207592	8.19	9.0	9.0	7.75	8.81	8.88
7207554	8.94	9.44	10.1	8.5	9.81	10.2
7207550	7.78	9.12	9.31	7.62	9.38	9.62
7207701	8.34	9.75	10.3	8.25	9.81	9.62
7207492	8.0	9.62	9.94	8.22	9.81	9.87
7207826	7.38	9.25	9.03	7.62	9.41	9.25
7207825	7.56	8.38	8.62	7.0	8.22	8.22
7207534	8.0	8.65	9.41	7.44	9.44	9.19

Appendix G

M16A2 TRIGGER PULL TEST III

Contractor A M16A2 Rifles

SERIAL #	DEEP	SHAL	SHAL	DEEP	SHAL	SHAL	DEEP	SHAL	SHAL	DEEP	SHAL	SHAL
7207821	135.5	152	162.5	128	154	150	119	149.5	148	121.5	148.5	151
7207429	134	160.5	162.5	133	167	162	134	168	168	143	172	171
7207475	132	158	155.5	138	147	157	130.5	158.5	160	129	164	159
7207736	127	157.5	160	134	164	158.5	139	168	156.5	140	167	159
7207825	122	147	129	115.5	139.5	146	124.5	145.5	137.5	123	151	137
7207534	140	153.5	154	136.5	152.5	156	132.5	157	146	128.5	150	158
7207488	119	154	161	134.5	168	161.5	136	161	158.5	133	163	160
7207826	126	151	146	131	151	151	127	147.5	147.5	128	149.5	144
7207547	112	143	143.5	116.5	145	142.5	119	145	143	122	151	151
7207827	130	151	161	128	157	158	128	154	165	123	162	158.5

Contractor B M16A2 Rifles

SERIAL #	DEEP	SHAL	SHAL	DEEP	SHAL	SHAL	DEEP	SHAL	SHAL	DEEP	SHAL	SHAL
6570509	117	146.5	150	123	150	149.5	121	148.5	146	119	152	149
6570394	117.5	148.5	140.5	118	148	149	117	151.5	148	116	148	148.5
6570316	116	139	138	106.5	135	142	121	130.5	140.5	118	148	146
6570623	116	137	136	114	145.5	144.5	122	146	151.5	119	148	140.5
6570318	111	133	130.5	103	132	131	105	131	133.5	108.5	134	134.5
6570345	100	141	140.5	105	138	133	105	140	146	110	140.5	141
6570546	114.5	143.5	142.5	116.5	146	146	119	146	142.5	114	134	142.
6570542	95.5	123	123.5	100	128.5	128	102	132	131.5	107	135.5	134.
6570665	114.5	135	140	113.5	141	141	115.5	140	140.5	114	138	142
6570393	115	143	145.5	120	145	145	118	145	143	118	144	146.5

APPENDIX G

M16 2nd TRIGGER PULL TEST 22 JUL 93

Contractor B, SN 6570520

CYCLE	DN1	SN1	SN2	DN2	SN3	SN4
1	122.0	141.0	137.5	123.0	145.5	146.0
2	124.0	145.0	148.5	122.0	148.0	149.0
3	125.5	147.0	152.0	124.0	151.0	151.0
4	121.5	149.5	134.5	125.0	152.0	156.0
5	123.0	149.0	155.0	125.5	153.0	153.0
6	111.5	150.0	152.0	122.0	151.5	152.5
7	124.0	150.0	152.0	125.0	155.0	158.5
8	114.0	147.5	154.0	122.5	148.0	154.0
9	125.5	148.0	151.5	125.5	158.0	151.5
10	131.5	153.5	152.0	128.5	156.0	152.0
11	135.0	154.0	148.0	126.5	154.0	152.0
12	134.0	159.0	150.0	122.0	153.0	154.0
13	127.0	150.5	158.0	122.0	153.0	149.0
14	126.0	147.5	152.5	122.5	150.0	148.0
15	126.0	151.0	150.0	127.0	152.0	147.0
16	129.5	153.0	154.0	119.0	146.0	150.0
17	120.5	148.0	150.0	119.0	151.0	142.5
18	122.0	146.0	151.0	118.0	148.0	149.0
19	128.5	149.0	131.5	128.5	143.0	151.0
20	127.0	149.0	149.0	124.0	153.5	144.0
21	123.0	156.0	148.0	120.0	146.0	140.5
22	117.0	144.5	141.0	121.5	141.0	142.0
23	117.0	148.0	143.5	116.5	149.0	146.5
24	128.5	148.0	148.5	127.5	149.0	153.0
25	130.0	154.5	158.0	125.5	151.5	156.0
26	127.5	149.0	146.0	123.5	153.0	148.5
27	132.0	156.0	153.0	129.0	157.0	153.0
28	136.0	149.0	145.0	130.0	150.0	155.0
29	133.0	148.5	150.5	125.0	155.0	158.0
30	125.5	152.5	151.0	131.0	155.0	158.0
31	134.0	154.5	154.0	133.0	157.0	164.0
32	130.0	150.0	151.0	128.0	149.5	152.0
33	126.0	150.0	144.0	129.5	153.0	154.5
34	127.0	150.5	140.5	125.0	151.5	148.5
35	119.0	140.5	142.0	118.0	149.0	141.5
36	128.0	143.0	145.0	135.0	152.5	147.0
37	122.0	144.0	147.0	113.0	144.0	145.0
38	123.5	150.0	152.0	119.5	147.5	149.0
39	126.5	146.0	139.0	118.0	141.5	146.0
40	129.5	147.0	146.0	129.0	143.5	149.0

	DN1	SN1	SN2	DN2	SN3	SN4	AVG
MEAN 1-20	7.81	9.34	9.32	7.72	9.44	9.41	
SD	0.36	0.23	0.42	0.18	0.23	0.24	0.28
MEAN 21-40	7.92	9.32	9.20	7.80	9.36	9.40	
SD	0.33	0.27	0.31	0.37	0.30	0.38	0.33
MEAN 1-40	7.86	9.33	9.26	7.76	9.40	9.40	
SD	0.35	0.25	0.37	0.29	0.27	0.32	0.31
GRAND AVG	8.84						0.31
GRAND SD	0.79						

APPENDIX G

Contractor B, SN 6570358

CYCLE	DN1	SN1	SN2	DN2	SN3	SN4
1	106.0	137.0	141.5	116.0	143.0	142.5
2	119.0	144.5	148.5	121.5	139.5	143.0
3	116.5	140.0	144.0	117.5	140.0	144.0
4	127.5	147.0	148.0	115.0	145.5	149.5
5	118.0	144.0	142.5	122.0	144.5	150.0
6	124.0	144.5	154.0	118.0	141.0	146.0
7	117.0	139.0	156.0	113.0	152.0	148.0
8	116.0	150.0	146.0	120.5	146.0	152.5
9	122.0	150.5	150.0	115.5	156.0	146.0
10	117.5	145.0	152.0	122.0	149.0	149.0
11	119.0	146.5	159.0	128.0	143.0	148.0
12	119.0	150.5	143.5	117.0	143.5	148.0
13	122.0	147.5	141.0	115.0	152.0	148.0
14	118.0	147.5	151.0	127.0	148.5	154.0
15	124.0	148.0	147.0	120.0	156.5	151.0
16	124.5	153.0	150.0	120.5	154.0	152.5
17	134.0	150.5	150.0	134.5	150.0	147.0
18	120.5	158.0	155.0	120.0	159.0	154.0
19	127.0	151.5	148.0	125.0	151.5	150.0
20	131.0	148.0	150.0	122.0	151.0	160.0
21	125.0	148.0	146.0	112.5	145.0	140.0
22	117.0	148.5	148.0	119.0	140.5	147.5
23	122.0	150.0	155.0	119.0	144.0	146.0
24	121.5	149.0	146.5	116.0	145.5	144.5
25	133.0	140.0	144.0	118.5	151.0	150.0
26	112.5	148.0	150.0	123.5	155.0	147.0
27	125.5	142.0	143.0	126.0	156.0	142.5
28	119.5	143.0	145.5	122.5	140.0	147.0
29	117.0	143.0	145.0	126.0	150.0	142.0
30	129.0	143.0	147.0	116.0	148.0	157.5
31	117.0	142.0	147.0	117.0	146.0	148.5
32	116.0	148.0	141.0	115.0	150.0	145.0
33	112.0	154.0	147.0	114.0	146.0	146.0
34	117.0	141.5	142.5	115.5	154.0	140.5
35	118.0	146.0	146.5	117.5	142.5	143.0
36	118.0	147.0	146.0	120.5	154.0	143.0
37	118.0	148.0	142.0	119.0	146.0	148.0
38	121.0	143.0	146.5	118.0	146.0	140.0
39	115.0	145.0	142.5	120.0	143.5	146.0
40	117.0	144.5	150.0	120.0	148.0	148.5

	DN1	SN1	SN2	DN2	SN3	SN4	AVG
MEAN 1-20	7.57	9.20	9.30	7.53	9.27	9.32	
SD	0.38	0.31	0.31	0.32	0.36	0.26	0.32
MEAN 21-40	7.47	9.10	9.13	7.42	9.22	9.10	
SD	0.33	0.22	0.20	0.23	0.29	0.26	0.26
MEAN 1-40	7.52	9.15	9.22	7.48	9.24	9.21	
SD	0.36	0.27	0.27	0.28	0.32	0.28	0.30
GRAND AVG	8.64						0.29
GRAND SD	0.86						

APPENDIX G

Contractor A, SN 7207713

CYCLE	DN1	SN1	SN2	DN2	SN3	SN4
1	125.5	154.5	153.0	125.5	148.0	152.5
2	137.0	167.0	152.0	121.0	148.5	150.5
3	129.0	152.0	160.0	132.0	159.5	155.5
4	133.0	167.5	162.5	124.0	156.5	159.0
5	133.0	159.5	158.0	125.0	154.0	155.0
6	120.5	151.0	156.5	124.0	151.0	153.5
7	126.0	155.0	156.0	126.5	162.0	158.5
8	125.5	161.0	156.5	127.0	161.0	158.0
9	122.0	159.0	157.0	135.0	160.0	157.0
10	133.5	158.0	162.5	132.5	164.5	156.0
11	127.5	160.0	161.0	130.0	166.0	164.5
12	132.0	158.0	164.0	130.0	159.0	162.5
13	132.5	167.0	164.0	130.0	158.0	159.0
14	132.0	160.0	159.0	129.5	166.0	164.5
15	130.0	158.0	164.0	135.0	164.5	165.0
16	136.0	169.0	172.0	133.5	166.0	158.0
17	134.0	166.0	167.0	137.0	156.0	159.5
18	129.5	163.5	168.0	131.5	162.5	162.5
19	130.5	165.5	162.0	137.0	160.0	158.0
20	133.0	163.5	163.5	130.0	165.0	163.0
21	138.0	154.0	168.0	128.5	173.5	171.0
22	133.0	175.5	166.0	130.5	158.0	176.0
23	136.5	173.0	156.0	142.0	161.5	158.0
24	133.5	171.0	172.0	136.0	171.0	158.0
25	132.0	164.5	160.0	153.5	162.0	185.0
26	140.0	157.0	158.0	135.0	164.5	179.0
27	143.0	158.0	161.0	148.5	179.0	168.0
28	148.5	166.0	167.5	135.0	183.0	173.0
29	139.0	159.0	164.0	139.5	181.5	174.5
30	134.0	162.0	174.0	131.5	177.0	164.0
31	146.5	165.0	174.0	150.5	180.5	166.0
32	134.5	178.0	175.0	140.0	160.0	183.5
33	132.0	166.0	171.0	139.5	181.0	162.0
34	142.0	162.5	167.0	135.5	184.0	185.0
35	136.0	160.0	164.5	141.0	161.0	179.5
36	158.5	179.0	162.0	135.5	166.0	173.0
37	136.0	159.0	164.5	134.0	168.0	162.0
38	139.0	170.0	160.5	145.0	158.0	154.0
39	146.5	179.0	177.0	136.0	166.0	181.5
40	138.5	174.5	156.5	152.5	167.0	164.0

	DN1	SN1	SN2	DN2	SN3	SN4	AVG
MEAN 1-20	8.13	10.05	10.06	8.11	9.96	9.91	
SD	0.28	0.33	0.32	0.28	0.35	0.26	0.30
MEAN 21-40	8.71	10.42	10.37	8.72	10.63	10.68	
SD	0.42	0.49	0.40	0.45	0.56	0.60	0.49
MEAN 1-40	8.42	10.23	10.21	8.41	10.30	10.30	
SD	0.46	0.45	0.39	0.48	0.58	0.60	0.49
GRAND AVG	9.65						0.43
GRAND SD	1.00						

Appendix G

Contractor A, SN 7207494

CYCLE	DN1	SN1	SN2	DN2	SN3	SN4
1	132.0	141.5	153.0	116.0	152.0	150.0
2	128.0	162.5	156.0	130.5	159.0	162.0
3	139.0	157.5	154.0	132.0	161.0	169.0
4	133.5	165.5	171.0	143.5	167.0	169.0
5	142.0	158.0	168.0	137.0	159.0	171.0
6	134.0	165.0	161.0	135.5	159.0	173.0
7	130.0	166.0	158.0	138.5	162.5	162.0
8	135.0	150.5	170.0	136.0	169.0	172.0
9	141.0	160.0	165.5	129.0	173.0	166.0
10	140.0	164.0	159.0	142.0	165.0	163.0
11	146.0	168.0	160.5	132.0	159.0	167.5
12	134.0	162.0	166.0	138.5	164.0	161.5
13	141.5	165.0	163.0	130.5	158.0	163.0
14	129.0	166.0	160.5	132.0	165.0	178.5
15	139.0	164.0	168.0	134.0	164.0	171.0
16	140.0	170.0	172.5	132.0	162.0	167.0
17	130.5	166.0	162.0	134.0	166.0	168.0
18	140.0	164.0	172.0	135.0	167.5	170.5
19	135.0	176.0	172.0	144.0	159.5	171.5
20	135.0	176.0	164.0	132.5	161.0	160.0
21	131.5	172.0	159.5	127.0	154.0	173.0
22	139.5	157.0	160.5	140.0	166.0	169.5
23	137.5	170.5	169.0	139.5	179.5	166.0
24	143.5	174.0	167.0	139.0	169.0	173.0
25	135.0	168.0	170.5	145.0	166.0	173.5
26	128.0	172.5	165.0	140.5	167.0	166.5
27	139.0	174.0	168.5	142.5	162.0	167.0
28	151.0	168.0	167.5	140.5	163.0	172.0
29	140.0	166.5	164.0	147.5	176.0	168.5
30	148.0	168.0	170.5	140.0	159.0	167.0
31	142.0	167.5	157.5	143.5	159.0	165.5
32	143.0	171.0	171.5	139.5	160.0	169.0
33	143.5	177.5	168.0	152.0	172.0	166.5
34	132.0	168.0	174.0	140.0	165.0	167.5
35	137.0	178.5	168.0	128.0	158.0	167.5
36	145.0	177.0	158.0	145.0	173.0	167.0
37	142.0	170.5	170.0	146.0	168.0	167.0
38	148.5	172.0	169.0	143.5	157.0	168.5
39	146.5	168.0	166.0	141.0	180.5	176.0
40	142.0	175.0	165.0	142.0	175.5	172.5

	DN1	SN1	SN2	DN2	SN3	SN4	AVG
MEAN 1-20	8.51	10.21	10.24	8.39	10.16	10.42	
SD	0.31	0.48	0.38	0.38	0.29	0.38	0.37
MEAN 21-40	8.80	10.67	10.40	8.82	10.40	10.57	
SD	0.37	0.30	0.29	0.35	0.48	0.19	0.33
MEAN 1-40	8.65	10.44	10.32	8.60	10.28	10.50	
SD	0.37	0.46	0.34	0.42	0.41	0.31	0.39
GRAND AVG	9.80						0.36
GRAND SD	0.92						

APPENDIX H

Contractor A M16A2 Rifles (Values are in ounces)

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
7207826	118	136	146	119	144	147	126	150	146	124	144	149
7207547	109	129	136	109	135	137	111	138	135	108	139	141
7207827	122	143	150	110	142	150	121	144	153	118	150	149
7207429	118	149	149	122	148	148	124	155	145	124	155	158
7207821	114	140	136	110	134	136	112	136	140	114	137	142
7207534	124	150	141	113	145	141	117	142	141	124	144	143
7207475	114	138	135	116	137	138	113	143	145	119	151	144
7207488	115	138	137	114	135	145	115	146	147	119	149	146
7207825	118	136	144	111	139	140	119	136	136	116	139	146
7207736	119	149	175	124	145	147	125	150	155	135	156	151

Contractor B M16A2 Rifles (Values are in ounces)

S/N	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh	Dp	Sh	Sh
6570393	132	140	139	118	133	140	113	145	140	118	139	140
6570394	128	155	151	126	153	154	131	161	164	135	163	160
6570509	140	145	148	122	154	153	126	155	149	128	151	153
6570345	114	132	139	110	137	143	112	140	143	113	139	140
6570623	126	151	144	128	143	151	125	151	155	125	151	144
6570316	118	141	142	116	138	138	118	141	145	124	142	146
6570542	114	141	139	114	157	141	114	140	140	117	139	139
6570318	112	136	136	111	136	137	117	140	141	114	139	140
6570665	116	137	138	117	137	140	116	137	137	116	140	139
6570546	124	148	152	122	147	141	120	146	149	121	143	148